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FRISHAUF, HOLTZ, GOODMAN & CHICK, PC
767 THIRD AVENUE
25TH FLOOR
NEW YORK, NY 10017-2023

EXAMINER

DIVINE, LUCAS

ART UNIT PAPER NUMBER

2624

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/881,925

Applicant(s)

YAMADA ET AL.

Examiner

Lucas Divine

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 14 May 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-74 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13-50 and 52-74 is/are rejected.
- 7) ☐ Claim(s) 12 and 51 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

1. The abstract of the disclosure is objected to because it contains more than 150 words.

Correction is required. See MPEP § 608.01(b).

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the relationship in claims 24, and 30 showing that the image forming devices can access more than one child/relay server must be shown or the feature(s) canceled from the claim(s). The applicant claims that the image forming devices access another relay/child relay server when the first relay server is unavailable, thus the image forming devices are claimed to be connected to more than one server, which is not shown in the drawings, specifically not in hierarchy figure 7. No new matter should be entered.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the relationship in claims 32 showing that there are plural parent relay servers and therefore that the children are connected to more

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than one parent server must be shown or the feature(s) canceled from the claim(s). The applicant claims that the child relay servers access another parent relay server when the first parent server is unavailable, thus the child relay servers are claimed to be connected to more than one parent server, which is not shown in the drawings, specifically not in hierarchy figure 7. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

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4. Claims 25 and 61 objected to because of the following informalities: on pages 56 (and 69), the bottom line (middle or page 69) claims a 'serer'. Appropriate correction to 'server' is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 14, page 53, applicant claims '**image forming apparatus suspends an access to said relay server while said second passing information is transmitted to said relaying server**'. If the access to the server were suspended while the second passing information is being transmitted, the transmission would stop because the transmission accesses would have been suspended. Examiner does not understand what access is suspended because it is unclear and indefinite whether or not the suspension is of the transmission of the second passing information access or a different access to the relay server.

6. Claims 21 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 21, which depends from claim 1, applicant claims in claim 21 '**said relaying server changes information to transmit to the administration apparatus according**

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to the state'. It is unclear and indefinite as to what information is being changed and how it is being changed. Examiner is unclear as to whether the changed information is first passing information, second passing information, or some other type of information not claimed prior. Therefore, claim 21 is rejected for not particularly pointing out or distinctly claiming the subject matter which the applicant regards as the invention.

Regarding claim 22, which depends from claim 21, claim 22 includes all of the limitations of parent claim 21, including the rejected limitations as discussed above. Therefore claim 22 is rejected based on its dependency from rejected claim 21.

7. Claims 25 – 34 and 61 – 65 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 25 and 61, which depends from claim 1 and 52, in claims 25 and 61, applicant claims '**said relay server further comprising: a child relaying server ... and a parent relaying server**'. Examiner does not understand how a server as claimed in claim 1 includes two separate server devices. Further, in light of Fig. 7 of applicant's disclosure, wherein applicant teaches the child and parent servers as being two separate and distinct physical devices, it is unclear and indefinite as to how the claimed single relay server includes both the child and the parent relay servers. Therefore, claims 25 and 61 are rejected for failing to particularly point out and distinctly claim what the applicant regards as the invention.

Regarding claims 26 – 34 and 62 – 65, which depend from claim 25 or 61, these claims include all of the limitations of parent claims 25 or 61, including the rejected limitations as

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discussed above. Therefore they are rejected based on their dependency from rejected claims 25 or 61.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1 – 8, 11, 13, 15 – 20, 35, 36, 52 – 58 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konishi (US 2004/0012807) in view of Kim et al. (US 6473788).

Regarding claim 1, Kim teaches **an image forming apparatus administration system, comprising:**

an image forming apparatus (printer 71 including print engine 16 for forming images; Fig. 16 shows embodiment 6 which includes the functionality of embodiments prior and adds the printer sending status information back to the administration apparatus),

an administration apparatus (host computer 21 for administering printer control),

a relaying server, including a relaying storage (relaying server 31 which must include a form of storage [RAM or hard drive typical of servers] in order to complete information processing; paragraph [0109]);

wherein said administration apparatus at least transmits first passing information for administrating said image forming apparatus by accessing said relaying server (host apparatus 21 transmits print data for printing as well as other command signals as first passing

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information that is sent by accessing the relay server) **or receives second passing information, corresponding a state of said image forming apparatus and stored in said relaying storage of said relaying server** (host apparatus ALSO receives status information corresponding to the state of the printer and/or print job [paragraphs 135-138] from the relay server [the SD packet block shown in Fig. 16 represents 'Status Data']);

and said image forming apparatus executes an access to said relaying server at a predetermined timing so as at least to obtain said first passing information (printer 71 receives print data/command signals from relay server 21 through mutual access), **stored in said relaying storage, or to transmit said second passing information** (printer 71 transmits reply and status data [see RD and SD blocks being transmitted in Fig. 16 between units 71 and 31] which occurs at a predetermined time [when the job starts, ends, or another point in time – examples given in paragraph 0011]; see also paragraph 015).

Although Konishi teaches the image forming apparatus, administration apparatus, and relay server connected via networks (Fig. 16), Konishi does not specifically teach two local networks, one with the image forming apparatus and one with the administration apparatus, each local networks connected through firewalls to the Internet where the relay server is located.

Kim teaches **an image forming apparatus, located in a first local network and connected to the Internet through a first firewall server of said first local network** (Fig. 1 printer 10 or copier 11 connected to LAN 15 which connects to the World Wide Web 6 through router 7 [wherein routers are known to include firewalls]);

an administration apparatus, located in a second local network and connected to the Internet through a second firewall server of said second local network (administration

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apparatuses 1 and 3 connected to LAN 19 which connects to World Wide Web 6 through router 2 [wherein routers are known to include firewalls]]; **and**

a relaying server located outside said first local network and said second local network, connected to the Internet (wherein the World Wide Web is made up of an interconnection of servers and mainframes that relay information).

It would have been obvious to one of ordinary skill in the art that the networks shown in Konishi could have been implemented like the system of Kim. The motivation for doing so would have been to allow users from remote locations to print data and perform maintenance on remote printers/copiers (see Kim col. 1 lines 18-52 and Konishi paragraph 0008 wherein it is an object of both inventions to monitor printers and Kim teaches that broadening the network has the improvements listed in Kim col. 1). Further, a user could select to print something for a friend wherein the friend is at a remote location, thus saving time and mailing costs. Other motivations for administrating printers over a wide network including the Internet instead of just a standard LAN are well known in the art.

Regarding claim 2, which depends from claim 1, Konishi further teaches that **first passing information includes ID information corresponding said image forming apparatus** (in order to route via the network [*1 of Fig. 17], the ID of the sending and receiving devices [host apparatus 21 and printer 71] must be included in transmission, thus the ID is implied in correctly routing passing information over the network), **and job information, for making said image forming apparatus a predetermined action** (first passing information includes PD which is print data for controlling the printer to print data [predetermined action]); **and said**

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image forming apparatus, identified with said ID information, executes said predetermined action according to said job information (printer 71 prints data sent from host apparatus).

Regarding claim 3, which depends from claim 2, Konishi further teaches that **job information is transmission command information for requesting said image forming apparatus to transmit said second passing information to said relaying server** (the RD in the first passing information is the reply information and reply request that requests the image forming apparatus to transmit the second passing information [reply and status information RD/SD] in response to the print job command; See Figs. 2a-2c).

Regarding claim 4, which depends from claim 3, Konishi further teaches that **second passing information is inherent data of said image forming apparatus** (status information SD is sent back as part of second passing information, wherein status information is inherent information to the function of the printer 71).

Regarding claim 5, which depends from claim 2, Kim further teaches administration of printers including sending **job information includes at least an updating program or updating data for controlling said image forming apparatus** (Kim teaches an administration upgrade firmware option shown in 150 in Fig. 10; col. 8 line 58, firmware is updating data for controlling the printers);

said image forming apparatus includes an administrated storage for storing at least a program or data (firmware by its nature is stored in the ROM of the printer); **and**

said image forming apparatus rewrite said program or said data, stored in said administrated storage, with said updating program or updating data of said job information in response to a receipt of said job information (updating firmware includes the

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sending of firmware to the image forming apparatus and the running of the installing of the firmware).

It would have been obvious to one of ordinary skill in the art that the standard administration features Kim would be available to the system of Konishi. The motivation for having this would be to allow the user at the host apparatus the ability to administer to the printer from a remote location.

Regarding claim 6, which depends from claim 5, Konishi in view of Kim teaches that the **image forming apparatus obtains said updating program or said updating data by downloading from said relaying server** (in the combined system of Konishi and Kim, the administration messages and data flow through the relay server 31, thus, the firmware data for upgrading would also pass through the server and would need to be downloaded to the printing device 71 from the relay server 21).

Regarding claim 7, which depends from claim 5, Kim further teaches that **said image forming apparatus suspends an access to said relaying server while said updating program or updating data is rewrote in said image forming apparatus** (it is implied by the term firmware that the complete update of ROM is completed, thus no function [printing, network access, anything else] is done while firmware is updated).

Regarding claim 8, which depends from claim 1, Konishi further teaches that **second passing information is inherent data of said image forming apparatus** (status information SD is sent back as part of second passing information, wherein status information is inherent information to the function of the printer 71).

Regarding claim 11, which depends from claim 8, Konishi further teaches that **inherent data is emergency information based on errors occurred in said image forming apparatus** (wherein status data as discussed in paragraph 136 is data in regards to the print job status, thus if there is a printer jam – standard error that would cause an emergency situation because the device can not function anymore – the user at host apparatus 21 would be made known of the error in printer status, other errors, such as paper out and toner out are also standard errors that Konishi alludes to in paragraph 136).

Regarding claim 13, which depends from claim 8, Konishi further teaches that **image forming apparatus includes an administrated storage for storing said inherent data which is transmitted to said administration apparatus** (in order to process the reply information and prepare the status info, the reply information processing section must access an implied printer memory that stores printer status info); **and**

said image forming apparatus transmits said inherent data, stored in said administrated storage, to said relaying server according to said first passing information (inherent status data SD is transmitted to relay server 31 as shown in Fig. 16, this according to the first passing information because the status SD and reply RD are in reply to a specific reply request sent as part of first passing information).

Regarding claim 15, which depends from claim 1, Konishi further teaches that **relaying storage stores a plural pieces of said first passing information** (host apparatus 21 sends first passing information that the relay storage must store in order to perform processing and transmitting functions, the first passing information includes two pieces of information as shown in Fig. 16 [RD and PD]).

Regarding claim 16, which depends from claim 15, Konishi further teaches that the **first passing information includes object device ID information for identifying said image forming apparatus to which said first passing information is transferred** (packets sent over a network include address information as to where they are headed); **said image forming apparatus executes an access to said relaying server so as to determine whether to obtain said first passing information according to said object device ID information, stored in said relaying storage** (in order to arrive at image forming apparatus 71, it must be determined that the packet of first passing information via the internet is bound for the specific image forming device 71, therefore, a determination must be made as to whether or not the packet ID's match for the sending/receiving of the first passing information across the network); **and said image forming apparatus obtains said first passing information, stored in said relaying storage, when it is determined to obtain said first passing information** (Fig. 16 of Konishi shows the PD/RD first passing information being obtained by image forming apparatus 71 from server 31).

Regarding claim 17, which depends from claim 1, Konishi further teaches that **image forming apparatus executes an access to said relaying server according to said predetermined timing** (paragraph 11 teaches the image forming device sending the reply information at a predetermined time, such as at the top or last of each print page or carriage return or the like, and in embodiment six, the sending of the reply includes accessing the relaying server for sending the reply).

Regarding claim 18, which depends from claim 17, Konishi further teaches that **predetermined timing is at least one of timing conditions at a predetermined time interval, a predetermined time of the day, at a predetermined timing, and a timing that a**

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predetermined condition is satisfied (wherein Konishi teaches the image forming device sending the reply information at a predetermined time, such as at the top or last of each print page or carriage return or the like, and in embodiment six, the sending of the reply includes accessing the relaying server for sending the reply - thus reading on 'at least one ... at a predetermined timing' or a when a predetermined condition is satisfied [the job is at its end or other examples in paragraph 0011])).

Regarding claims 19, which depends from claim 1, Konishi in view of Kim further teaches that **one of said administration apparatus, which transmits said first passing information, and said image forming apparatus, which transmits said second passing information, executes an access to said relaying server for confirming that said relaying server receives normally said first passing information or said second passing information** (by adding the Internet and firewall features of Kim to the networked system of Konishi, the system therefore adds the use of TCP/IP packets to send data over the internet, at the end of each packet of TCP/IP is a checksum field that is checked both at sending and receiving and if the packet has an error in transmission, the packet is resent, thus, the sending device [either the host apparatus 21 or the printer 71] resends the packet if it is confirmed [by computing the checksum] that the packet has not been received correctly).

Regarding claim 20, which depends from claim 19, Konishi in view of Kim further teaches that **one of said administration apparatus and said image forming apparatus transmits again said first passing information or said second passing information when said relaying server does not receive normally said first passing information or said second passing information** (by adding the Internet and firewall features of Kim to the networked

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system of Konishi, the system therefore adds the use of TCP/IP packets to send data over the Internet [Kim col. 3 line 54], at the end of each packet of TCP/IP is a checksum field [Kim col. 3 line 59] that is checked both at sending and receiving and if the packet has an error in transmission, the packet is resent, thus, the sending device [either the host apparatus 21 or the printer 71] resends the packet if it is confirmed [by computing the checksum] that the packet has not been received correctly).

Regarding claim 35, which depends from claim 1, Konishi in view of Kim further teaches that **image forming apparatus is connected with the Internet through a public line and a provider** (it is implied in the that the World Wide Web 6 of Kim is made up of public lines and internet providers, and that the printer 10 and 11 of Kim are connected to the World Wide Web through these connections; Fig. 1).

Regarding claim 36, which depends from claim 1, Konishi further teaches that **image forming apparatus forms an image on a recording medium** (printer 71 is taught with a print engine 16 that prints out images on paper; Fig. 16).

Regarding claim 52, Konishi teaches **a relaying server 31, connected to the Internet, comprising:**

a relaying storage for storing at least one of a first passing information to administrate an image forming apparatus and a second passing information corresponding a state of said image forming apparatus (relaying server 31 which must include a form of storage [RAM or hard drive typical of servers] in order to complete information processing; processing discussed in paragraph [0109] – first passing information PD/RD is sent to image

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forming apparatus 71 and second passing information RD/SD [which includes SD the status information] is received from image forming apparatus as shown in Fig. 16);

a communication means for executing an access to or for receiving an access from at least one of said image forming apparatus and an administration apparatus (relay server 31 accesses both image forming apparatus 71 and host apparatus 21 via connections shown in Fig. 16 for relaying information between them through communication means 23 and the line between 31 and 71)

a control means for controlling said communication means to transmit said first passing information, stored in said relaying storage, to said image forming apparatus (interface 33 transmits first passing information [PD/RD] to the printer 71) **or to receive said second passing information from said image forming apparatus** (interface 33 also receives second passing information [RD/SD] from printer 71) **and for controlling said relaying storage to store said second passing information when said communication means receives an access from said image forming apparatus** (in order to perform the job processing in the job processing information detection section in relay server, a controller/CPU must be present and must access a memory as discussed above to perform the controlling tasks); **and**

said control means for controlling said communication means to transmit said second passing information, stored in said relaying storage, to said administration apparatus (Fig. 16 shows the second passing information [RD/SD] being received at the administration apparatus 21 from the relay server 31) **or to receive said first passing information from said administration apparatus** (relay server receives first passing information [PD/RD] from the host apparatus 21 as shown in Fig. 16) **and for controlling said**

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relaying storage to store said first passing information when said communication means receives an access from said administration apparatus (in order to perform the job processing in the job processing information detection section in relay server, a controller/CPU must be present and must access a memory as discussed above to perform the controlling tasks).

While Konishi teaches the transfer of data over networks between the host apparatus 21, relay server 31 and printer 71, Konishi does not specifically teach that these networks are the Internet.

Kim teaches an image forming apparatus, located in a first local network and connected to the Internet through a first firewall server of said first local network (Fig. 1 printer 10 or copier 11 connected to LAN 15 which connects to the World Wide Web 6 through router 7); an administration apparatus, located in a second local network and connected to the Internet through a second firewall server of said second local network (administration apparatuses 1 and 3 connected to LAN 19 which connects to World Wide Web 6 through router 2); and a relaying server located outside said first local network and said second local network, connected to the Internet (wherein the World Wide Web is made up of an interconnection of servers and mainframes that relay information).

It would have been obvious to one of ordinary skill in the art that the networks shown in Konishi could have been implemented like the system of Kim. The motivation for doing so would have been to allow users from remote locations to print data and perform maintenance on remote printers/copiers (see Kim col. 1 lines 18-52 and Konishi paragraph 0008 wherein it is an object of both inventions to monitor printers and Kim teaches that broadening the network has the improvements listed in Kim col. 1). Further, a user could select to print something for a

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friend wherein the friend is at a remote location, thus saving time and mailing costs. Other motivations for administrating printers over a wide network including the Internet instead of just a standard LAN are well known in the art.

Regarding claim 53, which depends from claim 52, arguments analogous to those of rejected claim 2 above are applicable to claim 53 because claim 2 includes the same dependent limitations as claim 53. Therefore, claim 53 is rejected for the same reasons as stated in the rejection of claim 2.

Regarding claim 54, which depends from claim 53, arguments analogous to those of rejected claim 3 above are applicable to claim 54 because claim 3 includes the same dependent limitations as claim 54. Therefore, claim 54 is rejected for the same reasons as stated in the rejection of claim 3.

Regarding claim 55, which depends from claim 54, arguments analogous to those of rejected claim 4 above are applicable to claim 55 because claim 4 includes the same dependent limitations as claim 55. Therefore, claim 55 is rejected for the same reasons as stated in the rejection of claim 4.

Regarding claim 56, which depends from claim 53, arguments analogous to those of rejected claim 5 above are applicable to claim 56 because claim 5 includes the same dependent limitations as claim 56. Therefore, claim 56 is rejected for the same reasons as stated in the rejection of claim 5.

Regarding claim 57, which depends from claim 53, arguments analogous to those of rejected claim 15 above are applicable to claim 57 because claim 15 includes the same dependent

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limitations as claim 57. Therefore, claim 57 is rejected for the same reasons as stated in the rejection of claim 15.

Regarding claim 58, which depends from claim 52, arguments analogous to those of rejected claim 8 above are applicable to claim 58 because claim 8 includes the same dependent limitations as claim 58. Therefore, claim 58 is rejected for the same reasons as stated in the rejection of claim 8.

Regarding claim 60, which depends from claim 58, arguments analogous to those of rejected claim 11 above are applicable to claim 60 because claim 11 includes the same dependent limitations as claim 60. Therefore, claim 60 is rejected for the same reasons as stated in the rejection of claim 11.

9. Claims 9, 10, 37, and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konishi and Kim as applied to claims 1, 8, and 36 above, and further in view of Ogura (US 5893005).

Regarding claim 9, which depends from claim 8, while the combination of Konishi and Kim teach a system that reports device status, the combination does not specifically teach the status information to include **usage history information of said image forming apparatus**.

Ogura teaches a system similar to the systems of Kim and Konishi shown in Fig. 5 that receives and sends status data through a communication control unit that acts as a relay server in between the printers and the administering device (status sending shown in Figs. 9 and 10). Ogura also teaches setting up a predetermined time for reporting to the administering device (Fig. 13). Further, Ogura teaches sending **usage history information of said image forming**

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apparatus (Fig. 13B, wherein the number of copied sheets gives the history of how much the device has been used).

It would have been obvious to one of ordinary skill in the art that the combination of Konishi and Kim could include information as to how many sheets of paper had been used. The motivation for doing so would have been to know the how long before new sheets would need to be added. The same motivation applies for other reports back to the user where the user knows something in order to better plan for the future in ordering supplies and maintenance on a device.

Regarding claim 10, which depends from claim 9, Ogura teaches the counting of the number of copied sheets in the system (Fig. 13B) which reads on **counts at least one of ... (4) a number of image-formed recording medium and said image forming apparatus transfers said count number to said relaying server as said inherent data** (wherein, in the system of Konishi, Kim and Ogura, the data about the count would be transferred to the relay server 31 in order to be transferred to the user at host apparatus 21).

Regarding claim 37, which depends from claim 36, arguments analogous to those of rejected claim 10 above are applicable to claim 37. Therefore, claim 37 is rejected for the same reasons as stated in the rejection of claim 10.

Regarding claim 59, which depends from claim 58, arguments analogous to those of rejected claim 9 above are applicable to claim 59 because claim 9 includes the same dependent limitations as claim 59. Therefore, claim 59 is rejected for the same reasons as stated in the rejection of claim 9.

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10. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konishi and Kim as applied to claim 1 above, and further in view of Motamed et al. (US 6519053).

Regarding claim 23, which depends from claim 1, while the combination of Konishi (relay server 31) in view of Kim (access to the Internet where multiple servers are) teach a single relay server on the Internet, the combination does not specifically teach multiple relay servers on the Internet.

Motamed teaches a system of administering to print devices **wherein there is a plurality of relaying servers, each of which has the same function of said relaying server** (Fig. 1C which teaches it is known in the art to have printer server systems where multiple relay servers work between the client 'host' 'administration' computer and the printers).

It would have been obvious to one of ordinary skill in the art that networked systems include multiple servers for redundancy and performance benefits. Thus, it would have been obvious to one of ordinary skill in the art to include the server system of Ogura in the Internet printing system of Konishi and Kim.

Regarding claim 24, which depends from claim 23, Motamed further teaches that the **image forming apparatus executes an access to a first relaying server, which is predetermined from said plurality of relaying servers** (Fig. 1C, see Printer 4020 accessing first direct server 3520); and

said image forming apparatus executes an access to a relaying server, which is selected from said plurality of relaying servers other than said first relaying server, when said access to said first relaying server is not possible (one of the advantages of having multiple servers as shown in Fig. 1C is to have redundancy, so while printer 4020 has a first

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server, it is still connected to the printer server system 3500 so that when 3520 is not available, the printer can access server 3540, 60 or 80).

11. Claims 25, 26, 29, 61, and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konishi and Kim as applied to claim 1 above, and further in view of Clough et al. (US 6788429).

Regarding claim 25, which depends from claim 1, while the combination of Konishi and Kim teach a networked system over the Internet with servers for relaying information, the combination does not specifically teach a parent/child structure system to the network.

Clough teaches **a child relaying server having a child relaying storage** (Fig. 1 child servers 16, wherein servers are known to have storage); **and**

a parent relaying server having a parent relaying storage (Fig. 1 parent server 14, wherein servers are known to have storage);

wherein said image forming apparatus executes an access to said child relaying server so as to obtain information stored in said child relaying storage or transmits said second passing information to said child relaying server (printers 18 send print status data to child server 16 in order to route the status data to the administration apparatus 12);

said administration apparatus executes an access to said parent relaying server so as to obtain information stored in said parent relaying storage or transmits said first passing information to said parent relaying server (administration apparatus 12 sends first passing information [print jobs or other administrative commands] to parent server 14 in order to route the commands to the correct printer);

wherein said first passing information, transmitted from said administration apparatus, is transferred from said parent relaying server to said child relaying server and stored in said child relaying storage of said child relaying server (as shown in Fig. 1, in order to reach the printers, the first passing information from the administration apparatus 12 [print jobs or other administrative commands, PD/RD in Konishi] the data must pass from the parent to the child server); **and**

said second passing information, transmitted from said image forming apparatus, is transferred from said child relaying server to said parent relaying server and stored in said parent relaying storage of said parent relaying server (as shown in Fig. 1, in order to reach the administration apparatus with the second passing information [status and reply information] the data must pass from the child server to the parent server).

It would have been obvious to one of ordinary skill in the art that a server structure such as that of Motamed could have been used in the Internet networked printing administration system of Konishi and Kim. The motivations for doing so would have been to increase efficiency. As the numbers of printers increases, the workload on an individual relay server becomes very heavy. By breaking the system into a hierarchy, the transmission levels become more manageable. Further, the system expense is reduced because the operators would only have to buy one expensive, powerful relay server to act as parent and then have cheaper ones for the children instead of buying one extremely powerful relay server to do all of the network requirements.

Regarding claim 26, which depends from claim 25, Clough teaches that **there is a plurality of image forming apparatuses, each of which has the same function of said image forming apparatus** (Clough Fig. 1, multiple child servers 16); **and**

said child relaying server integrates a plural pieces of said second passing information transmitted from said plurality of image forming apparatuses so as to form an integrated second passing information and transmits said integrated second passing information to said parent relaying server (transferred over a network, information from image forming devices arrives at child relay server in a plurality of packets, which the child relay server must integrate in order process and send them to the parent server).

Regarding claim 29, which depends from claim 25, the combination teaches that:

wherein said first passing information is transmission command information for having said image forming apparatus transmit said second passing information (first passing information in Konishi includes RD, the reply information request which prompts the second passing information from the printer 71, Fig. 16);

said image forming apparatus transmits said second passing information to said child relaying server according to said transmission command information, obtained through said child relaying server (the second passing information reply [RD/SD] is sent through the child servers to the parent server in the combination of Konishi, Kim, and Clough, based on the server structure of Clough, in order to arrive at the administrative apparatus 12); **and**

said child relaying server transmits said second passing information, obtained from said image forming apparatus, to said parent relaying server (in order to arrive at the

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apparatus 12, the child server 16 must pass the information through parent server 14, Clough Fig. 1).

Regarding claim 61, which depends from claim 52, arguments analogous to those of rejected claim 11 above are applicable to claim 61 because claim 11 includes the same dependent limitations as claim 61. Therefore, claim 61 is rejected for the same reasons as stated in the rejection of claim 11.

Regarding claim 62, which depends from claim 61, arguments analogous to those of rejected claim 26 above are applicable to claim 62 because claim 26 includes the same dependent limitations as claim 62. Therefore, claim 62 is rejected for the same reasons as stated in the rejection of claim 26.

12. Claims 38 – 44, 47, 50, 66 – 70, 72, and 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konishi and Motamed.

Regarding claim 38, Konishi teaches **an image forming apparatus for forming an image on a recording medium, comprising:**

a communication means for executing an access to a relaying server

(communication/network line going between the two interfaces in the devices as shown in Fig. 16);

a control means for controlling said communication means so as to receive a first passing information to administrate said image forming apparatus from a relaying storage of said relaying server by executing said access to said relaying server (first passing

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information [PD/RD] to administrate the functions of printer 71 is received from the relay server through interface 12); **and**

said control means for controlling said communication means so as to transmit a second passing information, corresponding a state of said image forming apparatus, to said relaying server (second passing information [RD/SD, which includes SD, the status of the printer device] is transmitted from the printer 71 to the relay server 31).

While Konishi teaches an image forming apparatus 71 as discussed above that is connected to a communication line/network, Konishi does not teach that the transmission [relay server access] of a first passing information at a predetermined or that the line/network is the Internet.

Motamed teaches both **sending a print job** (first passing information) **at a predetermined time** (col. 1 lines 55-57, wherein the ability to schedule a print job request to be initiated at a predetermined time is shown to be known in the art) **and a networked printing system that accesses the Internet** (Figs. 1C, 1D, 1E, col. 13 lines 13-32, specifically line 30, wherein the networks include access to the Internet [also, col. 6 line 47 teaches the gateway servers may possess firewalls]).

It would have been obvious to one of ordinary skill in the art that a print job can be scheduled for a specific time as taught in Motamed. The motivation for doing so would have been to give the user more control and be able to plan out print jobs and batches of print jobs. For example, if a user has a plethora of large documents to print out, say large handouts for a meeting the following week, the user could schedule the printing to print out during the night or over the course of a few nights so that during the day, normal use of the printers could take

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place. Further, if a user knows they will be at the printers at a certain time that day, they could schedule the printing around that time so that there is less a likelihood that some other person will take their print job. Other examples of planning print output are well known in the art.

It would have also been obvious to one of ordinary skill in the art that the networks shown in Konishi could have been implemented like the system of Motamed. The motivation for doing so would have been to allow users from remote locations to print data and perform maintenance on remote printers/copiers. Further, a user could select to print something for a friend wherein the friend is at a remote location, thus saving time and mailing costs. Other motivations for administrating printers over a wide network including the Internet instead of just a standard LAN are well known in the art.

Regarding claim 39, which depends from claim 38, Konishi further teaches that **relaying server stores said second passing information, transmitted from said image forming apparatus, in said relaying storage** (relaying server 31 must include a form of storage [RAM or hard drive typical of servers] in order to complete information processing; paragraph [0109]).

Regarding claim 40, which depends from claim 38, Motamed further teaches that **local network has a connection to the Internet through a firewall server** (Figs. 1C, 1D, 1E, col. 13 lines 13-32, specifically line 30, wherein the networks include access to the Internet [also, col. 6 line 47 teaches the gateway servers may possess firewalls]).

Regarding claim 41, which depends from claim 38, Konishi further teaches that the **first passing information includes object device ID information for identifying said image forming apparatus to which said first passing information is transferred** (packets sent over a network include address information as to where they are headed); **said image forming**

apparatus executes an access to said relaying server so as to determine whether to obtain said first passing information according to said object device ID information, stored in said relaying storage (in order to arrive at image forming apparatus 71, it must be determined that the packet of first passing information via the internet is bound for the specific image forming device 71, therefore, a determination must be made as to whether or not the packet ID's match for the sending/receiving of the first passing information across the network); **and said image forming apparatus obtains said first passing information, stored in said relaying storage, when it is determined to obtain said first passing information** (Fig. 16 of Konishi shows the PD/RD first passing information being obtained by image forming apparatus 71 from server 31).

Regarding claim 42, which depends from claim 41, Konishi further teaches that **first passing information includes ID information corresponding said image forming apparatus** (in order to route via the network [*1 of Fig. 17], the ID of the sending and receiving devices [host apparatus 21 and printer 71] must be included in transmission, thus the ID is implied in correctly routing passing information over the network), **and job information, for making said image forming apparatus a predetermined action** (first passing information includes PD which is print data for controlling the printer to print data [predetermined action]); **and said image forming apparatus, identified with said ID information, executes said predetermined action according to said job information** (printer 71 prints data sent from host apparatus).

Regarding claim 43, which depends from claim 42, Konishi further teaches that **job information is transmission command information for requesting said image forming apparatus to transmit said second passing information to said relaying server** (the RD in the first passing information is the reply information and reply request that requests the image

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forming apparatus to transmit the second passing information [reply and status information RD/SD] in response to the print job command; See Figs. 2a-2c).

Regarding claim 44, which depends from claim 43, Konishi further teaches that **second passing information is inherent data of said image forming apparatus** (status information SD is sent back as part of second passing information, wherein status information is inherent information to the function of the printer 71).

Regarding claim 47, which depends from claim 38, Konishi further teaches that **second passing information is inherent data of said image forming apparatus** (status information SD is sent back as part of second passing information, wherein status information is inherent information to the function of the printer 71).

Regarding claim 50, which depends from claim 47, Konishi further teaches that **inherent data is emergency information based on errors occurred in said image forming apparatus** (wherein status data as discussed in paragraph 136 is data in regards to the print job status, thus if there is a printer jam – standard error that would cause an emergency situation because the device can not function anymore – the user at host apparatus 21 would be made known of the error in printer status, other errors, such as paper out and toner out are also standard errors that Konishi alludes to in paragraph 136).

Regarding claim 66, Konishi teaches **an administration apparatus for administrating an image forming apparatus which is connected to the Internet, comprising:**

a communication means for executing an access to or for receiving an access from a relaying server, through a local network (network interface 22 inside host apparatus 21 in Fig. 16 executes communication accesses with the local network 23 to the relaying server 31);

a control means for controlling said communication means so as to transmit a first passing information, to administrate said image forming apparatus, to said relaying server by executing said access to said relaying server (first passing information [PD/RD] to administrate commands on image forming apparatus 71 is transmitted from apparatus 21 to relay server 31); and

said control means for controlling said communication means so as to receive a second passing information, corresponding a state of said image forming apparatus, from said relaying server (printer driver 2 controls communication means 22 to receive printer device status from the relay server as passed from the image forming apparatus [box SD going into job processing state monitor section 5 is the state of the image forming apparatus]).

While Konishi teaches an image forming apparatus 71 as discussed above that is connected to a communication line/network, Konishi does not teach that the receiving [relay server access] of a first passing information at a predetermined or that the line/network is the Internet.

Motamed teaches both **sending a print job** (first passing information) **at a predetermined time** (col. 1 lines 55-57, wherein the ability to schedule a print job request to be initiated at a predetermined time is shown to be known in the art – and if the print job is sent to the relay server at a predetermined time, the print job is also then received by the image forming apparatus at a predetermined time through a relay server/printer access as claimed by applicant)

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and a networked printing system that accesses the Internet (Figs. 1C, 1D, 1E, col. 13 lines 13-32, specifically line 30, wherein the networks include access to the Internet [also, col. 6 line 47 teaches the gateway servers may possess firewalls]).

It would have been obvious to one of ordinary skill in the art that a print job can be scheduled for a specific time as taught in Motamed. The motivation for doing so would have been to give the user more control and be able to plan out print jobs and batches of print jobs. For example, if a user has a plethora of large documents to print out, say large handouts for a meeting the following week, the user could schedule the printing to print out during the night or over the course of a few nights so that during the day, normal use of the printers could take place. Further, if a user knows they will be at the printers at a certain time that day, they could schedule the printing around that time so that there is less a likelihood that some other person will take their print job. Other examples of planning print output are well known in the art. It would have also been obvious to one of ordinary skill in the art that the networks shown in Konishi could have been implemented like the system of Motamed. The motivation for doing so would have been to allow users from remote locations to print data and perform maintenance on remote printers/copiers. Further, a user could select to print something for a friend wherein the friend is at a remote location, thus saving time and mailing costs. Other motivations for administrating printers over a wide network including the Internet instead of just a standard LAN are well known in the art.

Regarding claim 67, which depends from claim 66, arguments analogous to those of rejected claim 40 above are applicable to claim 67 because claim 40 includes the same dependent

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limitations as claim 67. Therefore, claim 67 is rejected for the same reasons as stated in the rejection of claim 40.

Regarding claim 68, which depends from claim 66, arguments analogous to those of rejected claim 42 above are applicable to claim 68 because claim 42 includes the same dependent limitations as claim 68. Therefore, claim 68 is rejected for the same reasons as stated in the rejection of claim 42.

Regarding claim 69, which depends from claim 68, arguments analogous to those of rejected claim 43 above are applicable to claim 69 because claim 43 includes the same dependent limitations as claim 69. Therefore, claim 69 is rejected for the same reasons as stated in the rejection of claim 43.

Regarding claim 70, which depends from claim 69, arguments analogous to those of rejected claim 44 above are applicable to claim 70 because claim 44 includes the same dependent limitations as claim 70. Therefore, claim 70 is rejected for the same reasons as stated in the rejection of claim 44.

Regarding claim 72, which depends from claim 66, arguments analogous to those of rejected claim 47 above are applicable to claim 72 because claim 47 includes the same dependent limitations as claim 72. Therefore, claim 72 is rejected for the same reasons as stated in the rejection of claim 47.

Regarding claim 74, which depends from claim 72, arguments analogous to those of rejected claim 50 above are applicable to claim 74 because claim 50 includes the same dependent limitations as claim 74. Therefore, claim 74 is rejected for the same reasons as stated in the rejection of claim 50.

13. Claims 45, 46, and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konishi and Motamed as applied to claim 38, 41, and 42 above, and further in view of Kim.

Regarding claim 45, which depends from claim 42, while Konishi and Motamed teach a system for controlling a printer, the combination does not specifically teach updating program or data for the image forming apparatus.

Kim teaches administration of printers including sending **job information includes at least an updating program or updating data for controlling said image forming apparatus** (Kim teaches an administration upgrade firmware option shown in 150 in Fig. 10; col. 8 line 58, firmware is updating data for controlling the printers);

said image forming apparatus includes an administrated storage for storing at least a program or data (firmware by its nature is stored in the ROM of the printer); **and**

said image forming apparatus rewrite said program or said data, stored in said administrated storage, with said updating program or updating data of said job information in response to a receipt of said job information (updating firmware includes the sending of firmware to the image forming apparatus and the running of the installing of the firmware).

It would have been obvious to one of ordinary skill in the art that the standard administration features Kim would be available to the system of Konishi and Motamed. The motivation for having this would be to allow the user at the host apparatus the ability to administer to the printer from a remote location and keep the operating programs up to date to keep reliability and performance up over time.

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Regarding claim 46, which depends from claim 45, Konishi and Motamed in view of Kim teaches that the **image forming apparatus obtains said updating program or said updating data by downloading from said relaying server** (in the combined system of Konishi, Motamed, and Kim, the administration messages and data flow through the relay server 31, thus, the firmware data for upgrading would also pass through the server and would need to be downloaded to the printing device 71 from the relay server 21).

Regarding claim 71, which depends from claim 68, arguments analogous to those of rejected claim 45 above are applicable to claim 71 because claim 45 includes the same dependent limitations as claim 71. Therefore, claim 71 is rejected for the same reasons as stated in the rejection of claim 45.

14. Claims 48, 49, and 73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konishi and Motamed as applied to claims 38 and 47 above, and further in view of Ogura.

Regarding claim 48, which depends from claim 47, while the combination of Konishi and Motamed teach a system that reports device status, the combination does not specifically teach the status information to include **usage history information of said image forming apparatus**.

Ogura teaches a system similar to the systems of Motamed and Konishi shown in Fig. 5 that receives and sends status data through a communication control unit that acts as a relay server in between the printers and the administering device (status sending shown in Figs. 9 and 10). Ogura also teaches setting up a predetermined time for reporting to the administering device (Fig. 13). Further, Ogura teaches sending **usage history information of said image forming**

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apparatus (Fig. 13B, wherein the number of copied sheets gives the history of how much the device has been used).

It would have been obvious to one of ordinary skill in the art that the combination of Konishi and Kim could include information as to how many sheets of paper had been used. The motivation for doing so would have been to know the how long before new sheets would need to be added. The same motivation applies for other reports back to the user where the user knows something in order to better plan for the future in ordering supplies and maintenance on a device.

Regarding claim 49, which depends from claim 48, Ogura teaches the counting of the number of copied sheets in the system (Fig. 13B) which reads on **counts at least one of ... (4) a number of image-formed recording medium and said image forming apparatus transfers said count number to said relaying server as said inherent data** (wherein, in the system of Konishi, Motamed, and Ogura, the data about the count would be transferred to the relay server 31 in order to be transferred to the user at host apparatus 21).

Regarding claim 73, which depends from claim 72, arguments analogous to those of rejected claim 48 above are applicable to claim 73 because claim 48 includes the same dependent limitations as claim 73. Therefore, claim 73 is rejected for the same reasons as stated in the rejection of claim 48.

Allowable Subject Matter

15. Claims 12 and 51 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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16. Claims 21, 22, 27, 28, 30 – 34 and 63 - 65 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US-6240456, Teng et al., 5-29-2001: teaches a system and method for collecting printer administration information including a host, server for relaying information and printer.

US-5828864, Danknick et al., 10-27-1998: teaches a network board which responds to status changes of an installed peripheral by generating a test page including error logging and status checking at specific times of the day.

US-6337745, Aiello, Jr. et al., 1-8-2002 : teaches the routing of printing jobs including a parent/children server structure as well as keeping/logging the status of printers.

US-5414494, Aikens et al., 5-9-1995 : teaches an automatic call to selected remote operators in response to predetermined machine conditions including fault detection and notification.

US-5580177, Gase et al., 12-3-1996 : teaches printer/client network with centrally updated printer drivers and printer status monitoring including client apparatuses with administration utilities, a server for relaying information and storing update programs, and printers.

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US-6384926, Mochizuki, 5-7-2002: teaches a network system having printers, printer for network system, server for network system, and terminal for network system including host computers, print server for relaying information, printer, status monitoring, and reporting errors.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucas Divine whose telephone number is 703-306-3440. The examiner can normally be reached on Monday - Friday, 7:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on 703-308-7452. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Lucas Divine
Examiner
Art Unit 2624

ljd

KING Y. POON
PRIMARY EXAMINER